

REMARKS

In view of the preceding amendments and following remarks, reconsideration of the present application is respectfully requested.

Claims 1-20 were pending in the Application and were rejected. By this Response, Claims 1-20 are canceled, and Claims 21-28 are presented. A new Abstract is submitted herein.

Claims 1-20 lacked clarity and did not recite the intended subject matter precisely. Such lack of clarity and the imprecision is evident in the prior art that was cited by the Office Action. The intended subject matter is described in the new Abstract being submitted herein.

Gain-controlled amplifier embodiments of the present invention comprise two signal output stages arranged in parallel to drive an output load in series. A maximum-gain stage provides a maximum of signal gain and the other minimum-gain stage fixes the minimum overall amplifier signal gain. Gain-control input signals differentially applied to the two such stages balance the contributions of the respective gain stages delivered to the common output load. In one aspect, a third shunting transistor is used across the minimum-gain stage. In another version, the

output load is a tapped resistor and the respective maximum and minimum gain stages drive different taps.

A fundamental embodiment of the present invention does not depend on a differential amplifier configuration, e.g., the full circuit of Figs. 1, 2, or 3. It is possible to construct a single-stage, single-ended amplifier. In Fig. 1, such are individually identified as amplifier stages 2 and 3.

For clarity, Claims 21-22 recite and use the element numbers from amplifier stage 2 in Fig. 1. Claims 23-24 recite a differential amplifier circuit embodiment, and use the element numbers from amplifier stages 2 and 3 in Fig. 1. Claims 25-26 recite and use the element numbers from amplifier stage 4 in Fig. 2. Claims 27-28 recite a differential amplifier circuit embodiment, and use the element numbers from amplifier stages 4 and 5 in Fig. 2.

Fig. 3 illustrates how the gain-controlled differential amplifier of Fig. 2 can be cascaded to provide a very wide differential amplification in which the first stage 100 will not go below a fixed minimum gain and therefore continue to provide the second stage 200 with a useable signal at the minimum overall gain control settings.

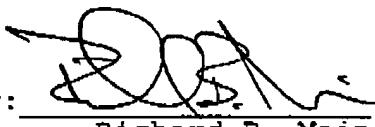
Accordingly, in view of the preceding amendments and remarks, it is respectfully submitted that the pending

application, with pending claims 21-28, is in condition for allowance and such action is respectfully requested.

Should the Examiner be of the opinion that a telephone conference with Applicant's attorney would expedite matters, the Examiner is invited to contact the undersigned.

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Respectfully submitted,

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